MAT-222-840

Name: _____

Team Problems for Chapter 1

Date: _____

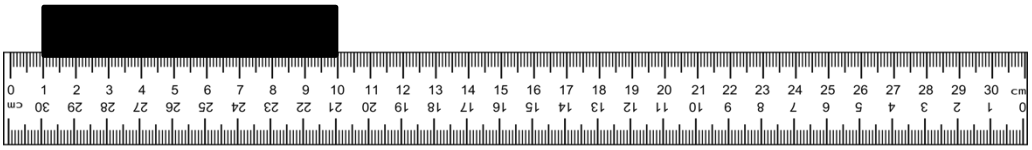
Problem #1: Find the Cell Phone

A cell phone tower at point A receives a cell phone signal from the southeast. A cell phone tower at point B receives a signal from the same cell phone from due west. Use the diagram below to find the location of the cell phone.

Describe how the postulates we learned in this section help you find the location of the cell phone.

Problem #2: Learning to Use a Ruler Part 1

Children sometimes try to measure the length of an object by placing one end of the object at the 1 marking instead of the 0 marking, as shown in the centimeter ruler in the figure.



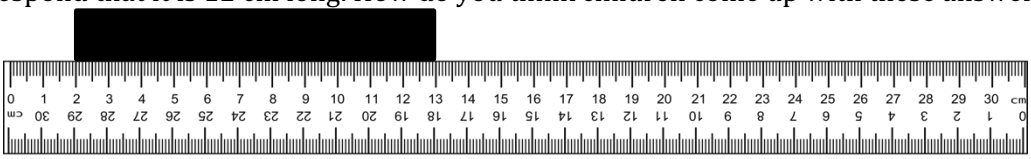
a. How might you help a child understand that the strip below is not 10 cm long, even though the end of the strip is at 10?

b. Why might a child put one end of the strip at the 1 marking?

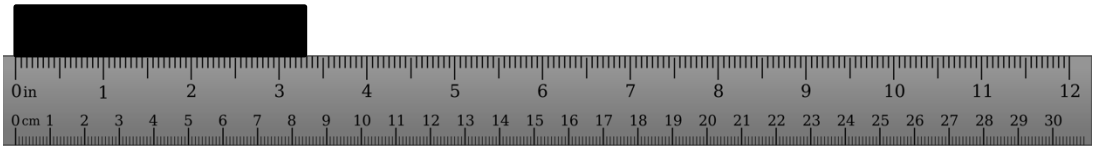
c. Can you measure by starting at 1 or another tick mark?

Problem #3: Learning to Use a Ruler Part 2

a. When asked how long the dark strip in the next figure is, some children will report that it is 13 cm long. Others will respond that it is 12 cm long. How do you think children come up with these answers?

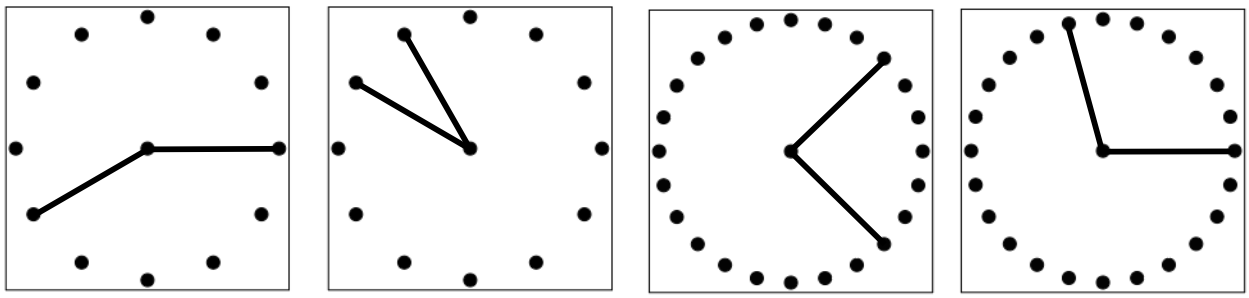


b. Some students might report that the strip measured by the inch ruler shown is 3.5 inches long. Why is this not correct? What is a correct way to report the length of the strip?



Problem #4: Angles on the Clock

Find the measure of the following angles ***without using a protractor***. Classify each as acute, right, or obtuse.



Measure: _____ _____ _____ _____

Classify: _____ _____ _____ _____

Problem #5: Angle Pairs and their Relationships

Find the measure of each angle in the angle pair described. Start by drawing a diagram.

a. The measure of one angle is twice the measure of its supplement.

b. The measure of one angle is 20 less than the measure of its complement.

Problem #6: Treasure Hunting

The treasure map for this exercise shows a cactus and a tree marking two spots in a desert location. The treasure is described as buried under a spot that is 30 feet from the cactus and 50 feet from the tree. Use this information (and a ruler and compass!) to help you show where the treasure might be buried.

Is the information enough to tell you *exactly* where the treasure is buried? Explain.